ABSTRACT

A weighted mean arrival time determines a delay offset of a fractionally spaced equalizer. The weighted mean arrival time is determined using path arrival times and energies from a Rake receiver. The difference between a weighted mean arrival time and a current delay offset is set to a difference X, in units of the equalizer tap spacing. If the difference X is greater than or equal to 1 or less than or equal to -1, then the current delay offset is updated by an incremental delay offset and the equalizer filter coefficients are shifted by a number of tap spacings. Otherwise, the current delay offset is not updated and the filter coefficients of the fractionally spaced equalizer are not shifted. Adaptation of the filter coefficients and updates of the delay offset of the equalizer occur only during pilot bursts so as to minimize adaptation transients.